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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,003	04/08/2004	Yong Bum Kim	054358-5007-01	8583
9629	7590	12/27/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			KIM, RICHARD H	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/820,003	Applicant(s) KIM ET AL.	
	Examiner Richard H. Kim	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 10-23 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/8/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10-12 and 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Takao (US 4,917,471).

Referring to claim 10, Takao et al. discloses a method comprising the steps of forming a first orientation film (18) on a first substrate and a second orientation film (17) on a second substrate; varying a thickness of the first orientation film or the second orientation film per a constant unit (Fig. 2, ref. 17); applying an alignment treatment on the first orientation film and the second orientation film, respectively (col. 16, lines 44-45); bonding the first substrate to the second substrate and maintaining a cell gap; and injecting the liquid crystal in the cell gap between the first and the second substrate (col. 15, lines 1-9).

Referring to claim 11, Takao discloses the method further comprising the step of forming a color filter, which comprises a first color (R), a second color (G) and a third color (B) in each of the pixels, wherein the total thickness of the orientation film of each pixel corresponding to each color is formed differently from one another (Fig. 2, ref. 17).

Referring to claim 12, Takao et al. discloses a method comprising the steps of forming a plurality of pixel electrodes, thin film transistors, data lines and gate lines between the second substrate and the second orientation film (abstract).

Referring to claim 17, Takao et al. discloses a method wherein the step of varying the total thickness of the orientation film of each pixel corresponding to each color further comprises the steps of forming an orientation film patterned in a way that the orientation film forms one of the first orientation film region and the second orientation film region corresponding to the first color (Fig. 2, ref. 17).

Referring to claim 18, Takao et al. discloses a method comprising the step of forming a patterned orientation film in the first orientation film region or the second orientation film region corresponding to the first color and the second color (Fig. 2, ref. 17).

Referring to claim 19, Takao et al. discloses a method further comprising the step of forming an orientation film on the first substrate or the second substrate corresponding to an entire region including the first color, the second color, and a third color (Fig. 2, ref. 17).

Referring to claim 20, Takao et al. discloses a method wherein the liquid crystal injected between the first and the second substrate is the ferroelectric liquid crystal (abstract).

Referring to claim 21, Takao et al. disclose that the first color was red (R).

Referring to claim 22, Takao et al. discloses that the second color was green (G).

Referring to claim 23, Takao et al. discloses that the third color is blue (B).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takao.

Takao discloses the method previously recited. Takao further discloses the step of forming a photo resist pattern (col. 11, lines 63-65). However, the reference does not disclose that the region of the orientation layer corresponding to the first or the first and then the first and the second region are opened, and etching an exposed portion of the orientation film only, wherein the first color is red and the second color is green.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the region of the orientation layer corresponding to the first or the first and then the first and the second region to be opened, and etching an exposed portion of the orientation film only since utilizing photolithography techniques in order to fabricate precise dimensions of liquid crystal layers is well known in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK


ANDREW SCHECHTER
PRIMARY EXAMINER